

Figure 1

0972994-120400

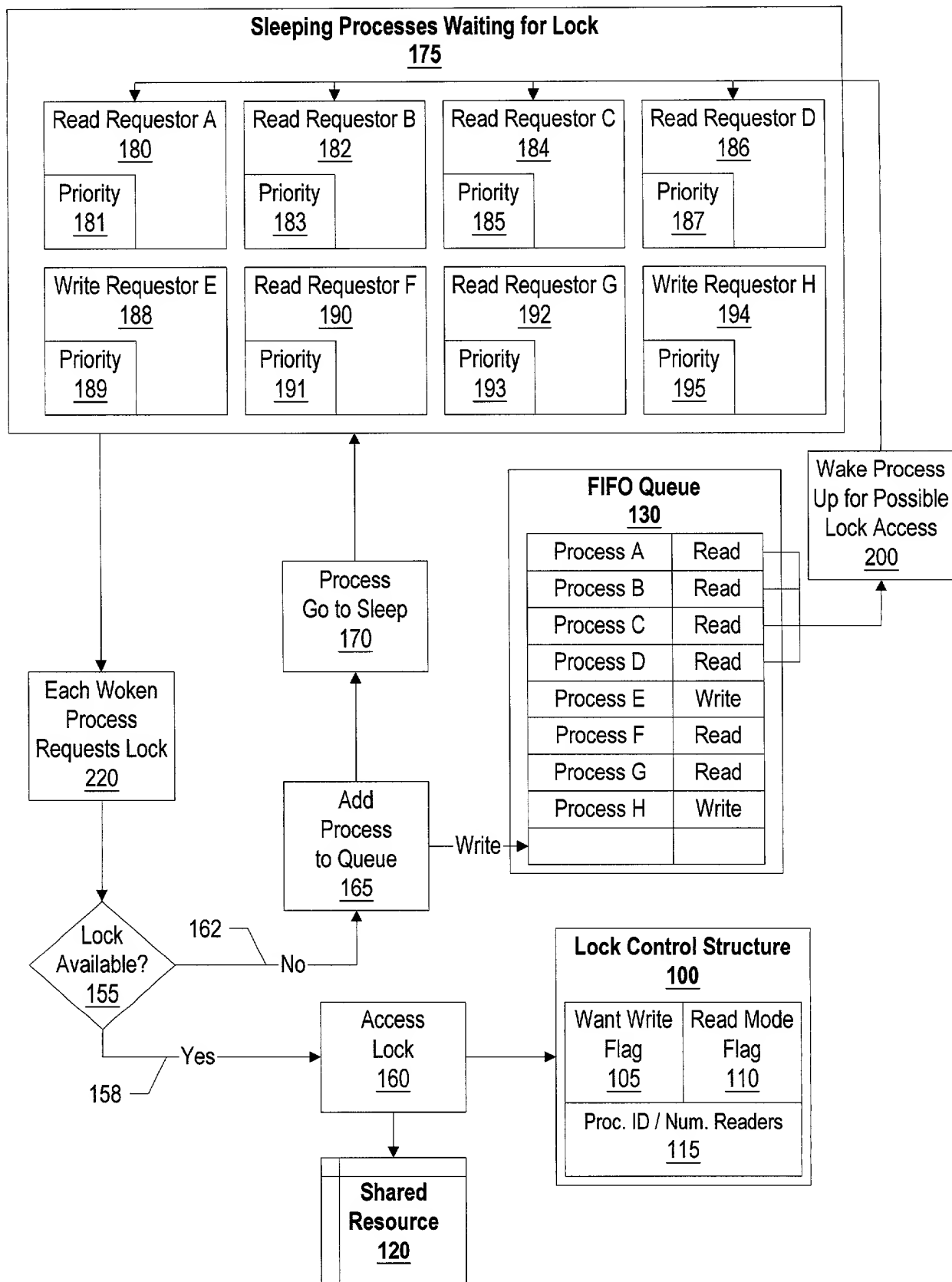


Figure 2

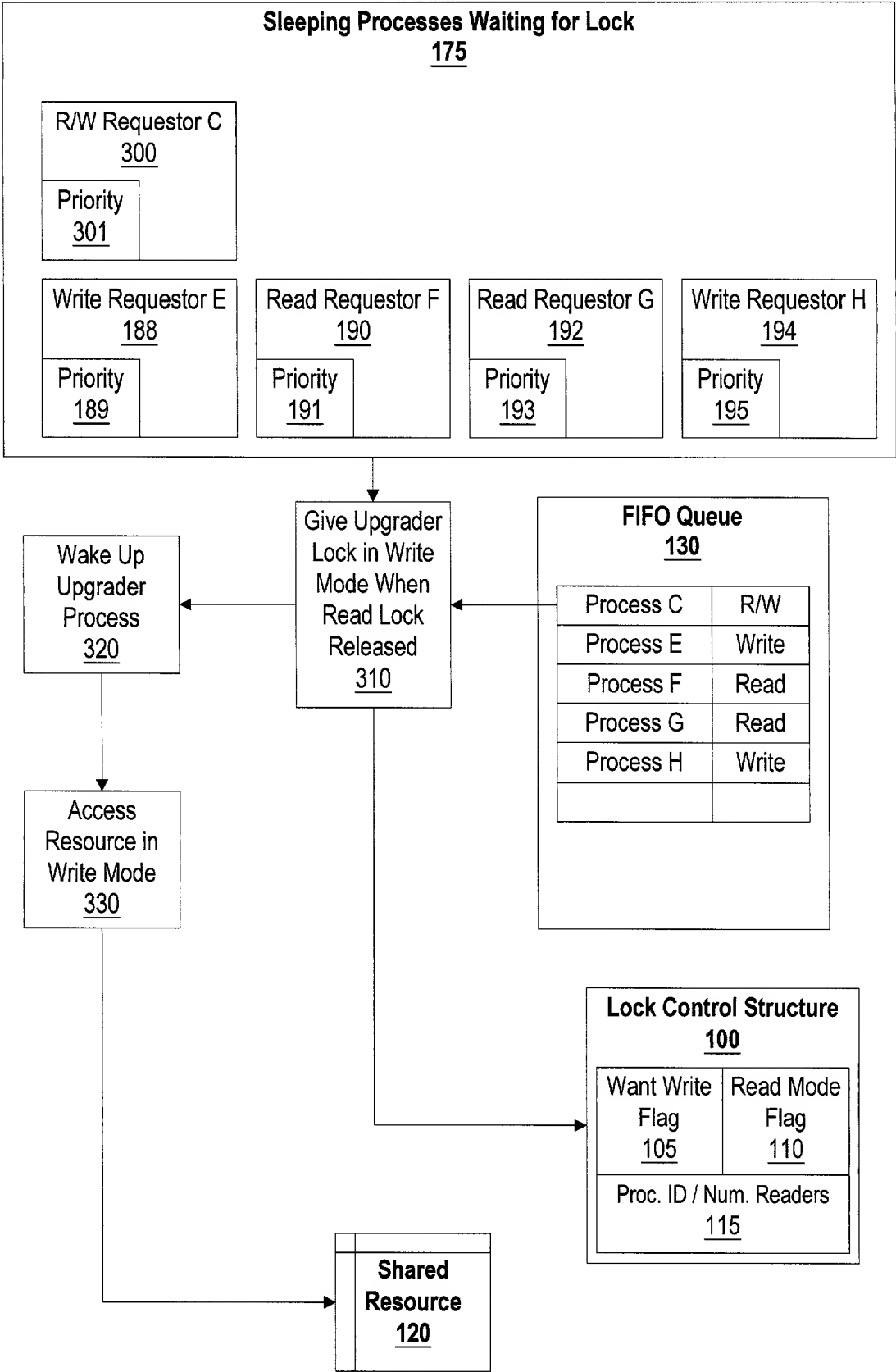


Figure 3

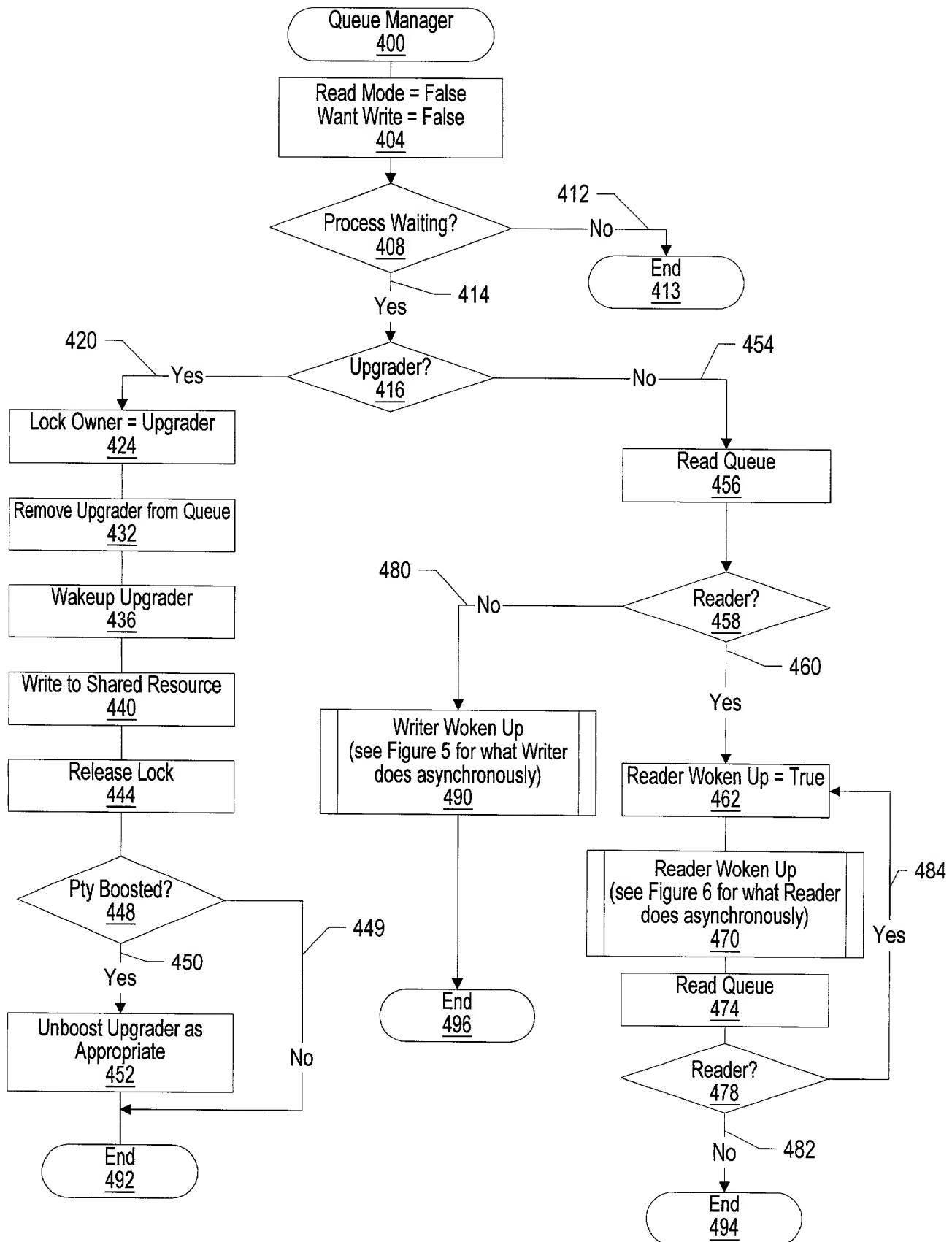


Figure 4


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graph TD
    Start([Process Reader 600]) --> 604{Lock Available? 604}
    604 -- Yes 606 --> 608[Read Mode Flag = True 608]
    608 --> 612[Num Readers = 1 612]
    612 --> 644[Speed Up Reader 644]
    644 --> 648[Read Shared Resource 648]
    648 --> 652{Upgrade? 652}
    652 -- Yes 654 --> 658[Process Upgrader see Figure 7 658]
    658 --> 662([End 662])
    652 -- No 666 --> 668[Release Lock Decrement Num Readers 668]
    668 --> 672[Slow Down Reader As Appropriate 672]
    672 --> 676{Num Readers = 0 ? 676}
    676 -- Yes 678 --> 684[Process Queue see Figure 4 684]
    684 --> 688([End 688])
    676 -- No 692 --> 696([End 696])
    604 -- No 614 --> 616{Lock in Read Mode? 616}
    616 -- Yes 630 --> 632{Reader Woken Up? 632}
    632 -- Yes 635 --> 640[Increment Num Readers 640]
    640 --> 644
    632 -- No 634 --> 636{Want Write Set? 636}
    636 -- Yes 639 --> 620[Add Reader to Queue 620]
    620 --> 624[Put Reader to Sleep 624]
    624 --> 628([End 628])
    636 -- No 638 --> 640
    616 -- No 618 --> 620

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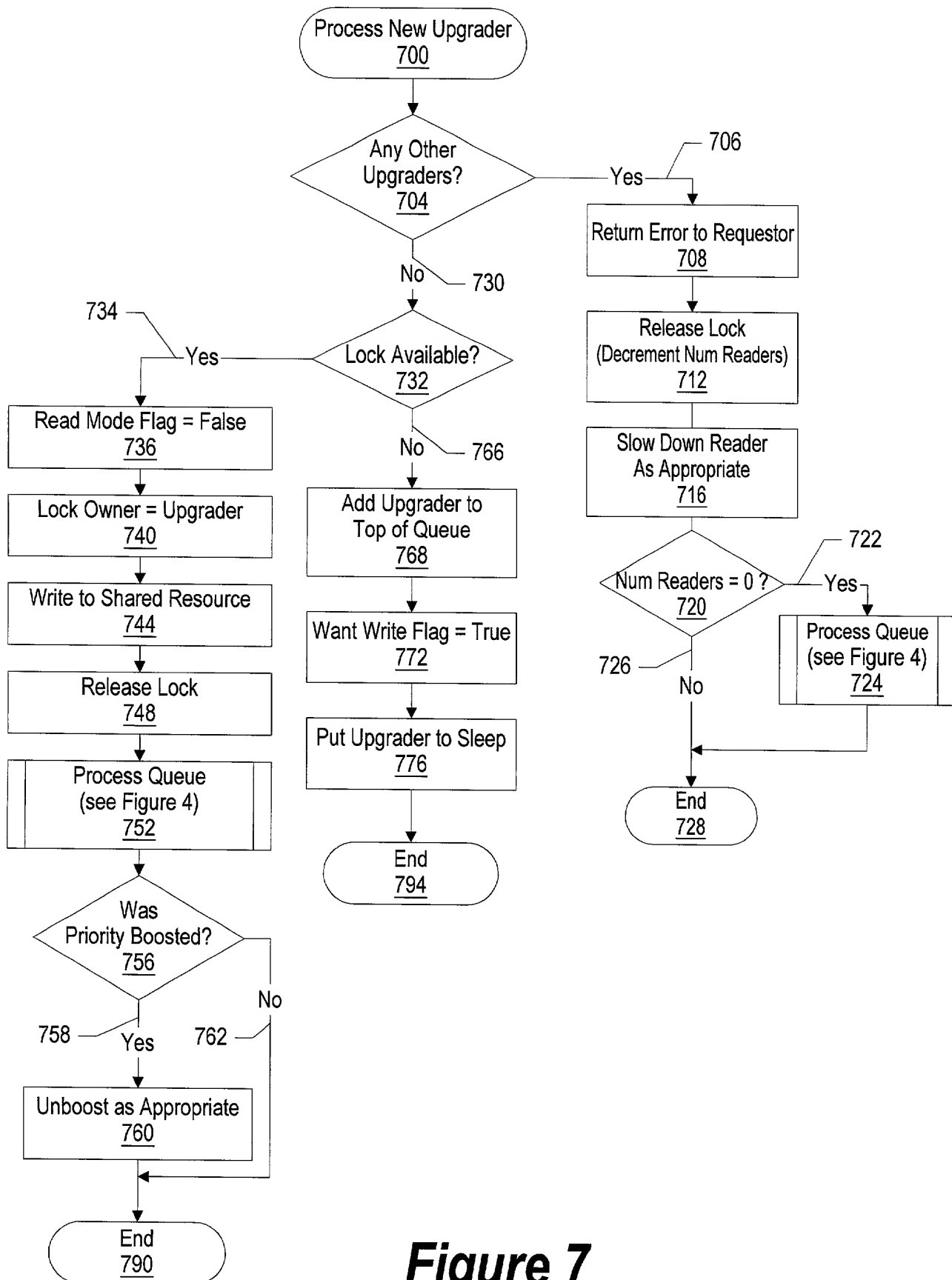


Figure 7

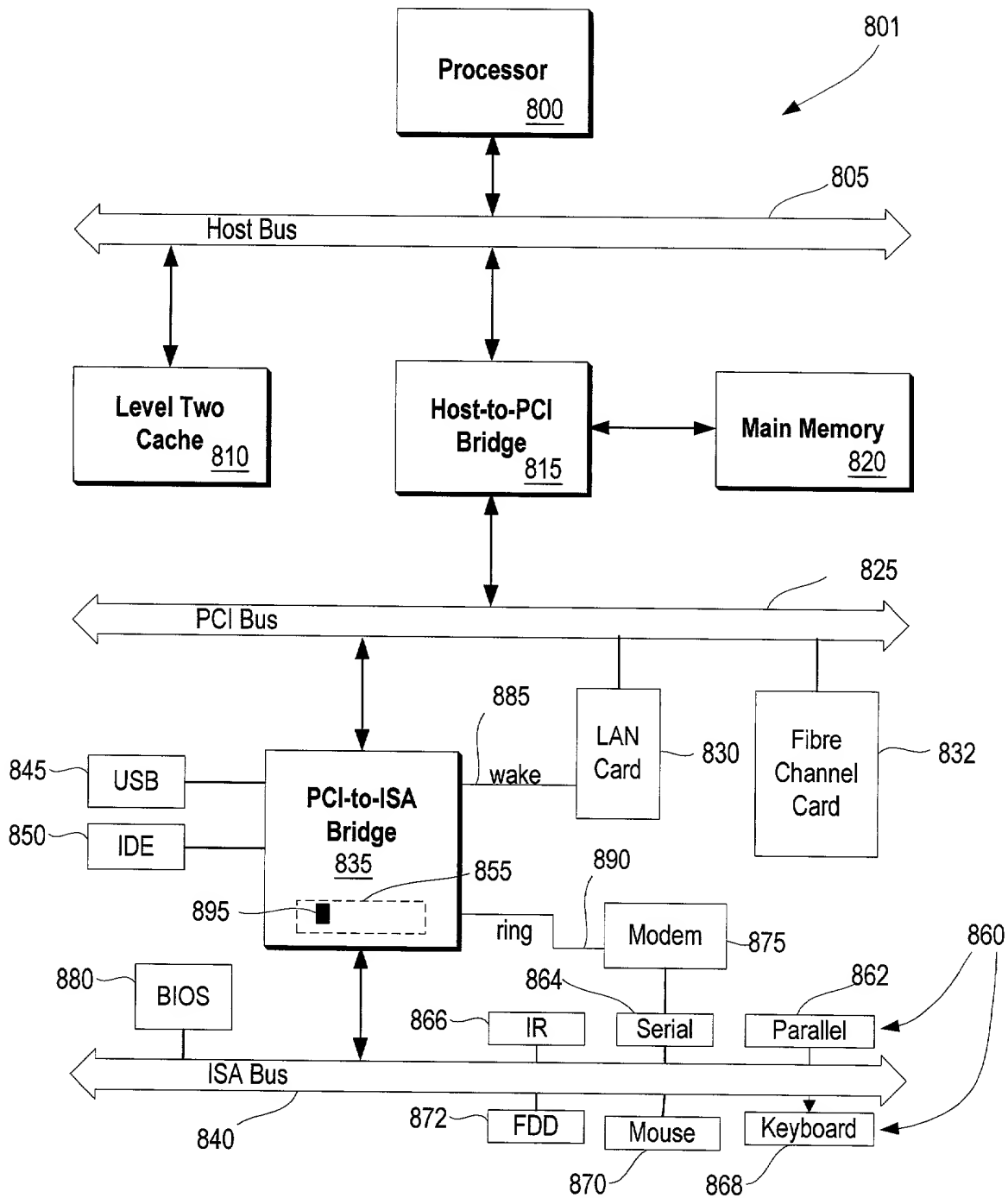


Figure 8